

REMARKS

Applicants thank the Examiner for examining the pending application. The Office Action dated December 28, 2007 has been received and its contents have been carefully reviewed.

Summary of the Office Action

Claims 1, 2, 9, 10 and 12 are rejected, and claims 4, 5, 7, 8, 13 and 14 are withdrawn. The Office Actions rejects claims 1, 2, 9, 10, and 12 under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections, and rejects claims 1, 2, 9, 10, and 12 under 35 U.S.C. 103(a) as being unpatentable over Yasuda et al. (US 4,842,371 A) in view of Saishu et al. (US 5,949,391 A).

Summary of the Response to the Office Action

Applicants have amended claims 1 and 9 to further define the invention. No new matter has been added. Reconsideration of the pending claims 1, 2, 9, 10 and 12 are respectfully requested.

Rejection Under 35 U.S.C 112, second paragraph

The applicants have amended independent claims 1 and 9 in view of the Examiner's comments set forth in Section 4 of the Office Action. Applicants respectfully submit that newly-amended claims are clear to one having ordinary skill in the art, and therefore respectfully request that the rejection under 35 U.S.C. 112, second paragraph, be withdrawn.

Rejection Under 35 U.S.C 103(a)

Applicants respectfully submit that newly-amended claim 1 is allowable over the cited references in that newly-amended claim 1 recites a combination of elements including, for example, “the voltages for the electric field alignment being changed from electric field alignment data signals and being analog gamma voltages”, and “wherein the turn-ON voltage is supplied to each of the gate lines in a range of from ten to four-hundred times during the electric field alignment”.

Also, Applicants respectfully submit that newly-amended claim 9 is allowable over the cited reference in that newly-amended claim 9 recites a combination of elements including for example, “the voltages for the electric field alignment being changed from electric field alignment data signals and being analog gamma voltages”, and “wherein the turn-ON voltage is supplied to each of the gate lines in a range of from ten to four-hundred times during the electric field alignment”.

The Office Action alleged on page 6 that it is noted that the features upon which Applicants reply (i.e., “analog gamma voltages” being the “voltages for electric field alignment”) are not recited in the rejected claims. Accordingly, Applicants have amended the claims to reflect the features.

In addition, the Office Action alleges on page 7 that Yasuda et al. illustrates there being sixteen transistors [Fig. 1; T₁₁-T₄₄] which receive the turn-ON voltage [Fig. 4; (b) & (c)] from the gate lines [Fig. 1; G1 & G2]. As such, one having ordinary skill in the art would recognize that the turn-ON voltage is supplied sixteen separate times (to each individual pixel transistor) during the electric field alignment.

Yasuda et al. (Col. 9, Lines 5-7) merely discloses that waveform (b) and (c) represents scanning signals applied respectively to the first and second control lines G1 and G2. In Yasuda et al., first scanning signal (Fig. 4 (b)) is applied to first control line G1, and then, second scanning signal (Fig. 4 (c)) is applied to second control signal G2. Accordingly to such disclosure in Yasuda et al., Applicants respectfully submit that one control signal is applied to each control line one time in Yasuda et al.

Moreover, one control signal of Yasuda et al. is applied to one control line only during one horizontal period. In contrast, the turn-ON voltage of the present invention is supplied to each of the gate lines in a range of from ten to four-hundred times during the electric field alignment. Hereinafter, 'during the electric field alignment' means period for aligning ferroelectric liquid crystal material using electric field. Thus, the 'during electric field alignment' of the present invention is completely different from horizontal period of Yasuda et al.

Furthermore, in Yasuda et al., analog signals Ro, Go, Bo, Re, Ge and Be applied to source lines are changed from digital signals VR, VG and VB for displaying factual image. In the present invention, analog signals Ro, Go, Bo, Re, Ge and Be of Yasuda et al. are disclosed. In other words, analog signals Ro, Go, Bo, Re, Ge and Be of Yasuda et al. correspond to R, G and B video data of the present invention. However, the present invention discloses voltage for electric field alignment completely different from R, G and B video data. The voltages for electric field alignment are changed from electric field alignment data signals, and are used for aligning ferroelectric liquid crystal material, not used for displaying factual image.

None of the cited references, taken individually or in combination, teaches or suggests at least the features of newly-amended independent claims 1 and 9. MPEP § 2143.03 instructs that "[t]o establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 409 F.2d 981, 180 USPQ 580 (CCPA 1974)." Accordingly, Applicants respectfully assert that the rejection of independent claims 1 and 9 be withdrawn. Further, Applicant respectfully asserts that the rejections of dependent claims 2, 10 and 12 under 35 U.S. C. § 103(a) should also be withdrawn at least because of their dependencies upon the respective independent claims 1 and 9 and for the reasons set forth above.

With no other rejection pending, Applicants respectfully submit that claims 1, 2, 9, 10 and 12 are in condition for allowance.

Conclusion

In view of the foregoing, Applicants respectfully request reconsideration and the timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding after consideration of the Amendment, the Examiner is invited to contact the Applicants' undersigned representative to expedite prosecution.

EXCEPT for issue fees payable under 37 C.F.R. 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due 37 C.F.R. 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No 50-0310. This

paragraph is intended to be CONSTRUCTIVE PETITION FOR EXTENSION OF TIME in accordance with 37 C.F.R. 1.136(a)(3).

Respectfully submitted,

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Dated: March 27, 2008

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